

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Applicant: Hezar et al.
Filed: Herewith
For: ANALOG-TO-DIGITAL CONVERSION SYSTEM WITH SECOND ORDER
NOISE SHAPING AND A SINGLE AMPLIFIER

INFORMATION DISCLOSURE STATEMENT

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

1. Pursuant to 37 C.F.R. 1.97 and 1.98, and in compliance with 37 C.F.R. 1.56, the Office's attention is directed to the patents, pending applications, publications and other information listed on the attached PTO-1449. A copy of each listed document is enclosed except for: (a) pending applications or (b) those previously cited or submitted to the Office in the following application(s) upon which this application relies for an earlier filing date under 35 U.S.C. 120:

Serial No.: _____
Filing Date: _____

Regarding any document, publication or other information for which a date is not given on the attached PTO-1449, Applicant(s) believe(s) the same may qualify as "prior" art to this application and should be treated accordingly, although Applicant(s) reserve(s) the right to contest the prior art status of any document, publication or information, should issue arise.

2. Regarding each listed document that is not in the English language, an English-language translation accompanies this Statement as indicated on the attached PTO-1449 or a concise explanation of the relevance of the document is set forth in the following document(s):

- (a) ____ Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report.
- (b) ____ Attachment entitled "Concise Explanation of Relevance of Non-English Language Documents".

3. Pursuant to 37 C.F.R. 1.97(b) this Statement is being filed (one must be checked):

- (a) X Within 3 months of the filing date or date of entry into the National Stage.
- (b) ____ Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 20-0668 for consideration of this Statement.
- (c) ____ Before the mailing date of a first Office Action after the filing of a request for continued examination under 37 C.F.R. 1.114.

(d) ___ After the period set forth in 37 C.F.R. 1.97(b) but before the mailing date of either a final action or a notice of allowance.

(1) ___ The required certification is given below, or

(2) ___ Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(p) for consideration of this Statement, or

(3) ___ Charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 20-0668

(e) ___ After the mailing date of either a final action or a notice of allowance, but before payment of the issue fee. Petition hereby is made for consideration of this Statement and the required certification is indicated below.

(1) ___ Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(i)(1), or

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4. Certification (if applicable)

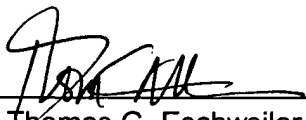
(a) ___ The undersigned hereby certifies that each item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this Statement.

(b) ___ The undersigned hereby certifies that no item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the undersigned's knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than 3 months prior to the filing of this Statement.

5. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-0668.

Respectfully Submitted,

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CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this paper, and the documents referred to as attached or enclosed, are being deposited with the United States Postal Service on the date set forth below in an envelope as "Express Mail Post Office to Addressee" service under 37 CFR 1.10, with the below indicated mailing label number, addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: October 31, 2003


Christine Gillroy

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PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

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| | | | | Application Number | |
| | | | | Filing Date | |
| | | | | First Named Inventor | Hezar et al. |
| | | | | Group Art Unit | |
| | | | | Examiner Name | |
| Sheet | 1 | of | 1 | Attorney Docket No. | TI-36449 |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|-----------------------|----------------------|-----------------------------------|---|---|---|
| Exam. Initials* | Cite No. ¹ | U.S. Patent Document | | Name of Patentee or Applicant of Cited Doc. | Date of Pub. of Cited Doc. (mm-dd-yyyy) | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number | Kind Code ² (if known) | | | |
| | AA | 5,065,157 | | Ribner et al. | 11/12/1991 | Entire Document |
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| FOREIGN PATENT DOCUMENTS | | | | | | | | |
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| Exam. Initials* | Cite No. ¹ | Foreign Patent Document | | | Name of Patentee or Applicant of Cited Doc. | Date of Pub. of Cited Doc. (mm-dd-yyyy) | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T ⁶ |
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| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS | | | | | |
|---|-----------------------|---|--|--|----------------|
| Exam. Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | | T ² |
| | CA | “A Direct Digital Synthesizer with a tunable Error Feedback Structure”, JOUKO JANKKA, IEEE Transactions on Communications, Vol. 45, No. 4, April, 1997, pp. 416-420. | | | |
| | CB | “A Noise-Shaping Coder Topology for 15+ Bit Converters”, L. RICHARD CARLEY, IEEE Journal of Solid-State Circuits, Vol. 24, No. 2, April, 1989, pp. 267-273. | | | |
| | CC | “Multibit Σ-Δ A/D Converter Incorporating A Novel Class of Dynamic Element Matching Techniques”, BOSCO H. LEUNG and SCHAT SUTARJA, IEEE Transactions on Circuits and Systems, Analog and Digital Signal Processing, Vol. 39, No. 1, January, 1992, pp. 35-51. | | | |
| | CD | “A 1.5V 2.4/2.9mW 79/50dB DR Sigma Delta Modulator for GSM/WCDMA in a 0.13um Digital Process”, G. GOMEZ and B. HAROUN, <i>Solid State Circuits Conference, Digest of Technical Papers</i>, Vol. 1, pp. 306-307, February 2002 San Francisco, CA, and Visuals Supplement, pp. 242, 243, 490. | | | |
| | CE | Institute of Electrical and Electronics Engineers, 2002 Digest of Technical Papers and Visuals Supplement 2002 to the Digest of Technical Papers, IEEE International Solid-State Circuits conference, Volume Forty-Five, ISSN 0193-6530, 13.3 “A Dual-Mode 80MHz Bandpass $\Delta\Sigma$ Modulator for a GSM/WCDMA IF-Receiver” T. SALO, T. HOLLMAN, S. LINGFORS and K. HALONEN, 7 pgs. | | | |
| | CF | “Behavioral Modeling of Seitched-Capacitor Sigma-Delta Modulators”, PIERO MALCOVATI, SIMONA BRIGATI, FABRIZIO FRANCESCONI, FRANCO MALOBERTI, PAOLO CUSIANATO and ANDREA BASCHIROTTO, IEEE Transactions on Circuits and Systems; Fundamental Theory and Applications, Vol. 50, No. 3, Mach. 2003, pp. 352-364. | | | |

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| Examiner Signature | | Date Considered | |
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